

**DESCRIPTION:**

Engine Flush Additive. Will neutralise acids and dissolve gums and varnish, breaks down glycol residues and holds in suspension in old oil ready for immediate draining. Can be applied to engines, transmissions, gearboxes, and compressors. Add to machine when hot and operate for 10-20 minutes then drain. Available in SAE 20. **Application Ratio: 10% to 100%.**

CHARACTERISTICS:**Additive Break Down**

When modern lubricant's additive packages "overload", the detergents and dispersants lose their ability to keep sludges in suspension. This allows gums to build up adhering to working parts and baking to a varnish with operational heat. Additives break down as their service lives are exceeded and they no longer provide sufficient protection.

Acids Formed

Corrosion inhibitors are progressively weakened until acidic residues begin to attack machinery components. Anti-wear agents breakdown allowing particles to throw off accelerating the build up of sludge.

When Oil is Added and Not Changed.

As oil additives reach the end of their operating life, damaging impurities coat the interior, especially with engines. When a new oil is added to engines during an oil change, the impurities in the old oil and those coating the engine parts, contaminate the new oil consuming some its protection from the beginning of its service life.

Normal Oil Change

Changing oil flushes away suspended impurities however, the old oil coating left on machine surfaces in severe cases can gum moving parts. When Liquid Intelligents 220 is applied prior to oil change, it dissolves these impurities and flushes them away with the old oil.

220 Softens and Dissolves Gum and Sludge.

Liquid Intelligents 220, if applied between 10 to 100% to the old used oil, will destroy the metallic adhesion of gum and varnish deposits to internal components. 220 will soften and suspend these deposit's in the used oil for easy removal.

Acidic Combustion By-Products Neutralised

Acidic engine conditions are neutralised by flushing with 220. This prevents the new lubricant's total base number from being depleted before operating the vehicle. Glycol engine coolant, when mixed with engine lubricants will damage the lubricant making it acidic, 220 dissolves all glycol residues and holds them in suspension ready for draining with the used engine oil.

Engines and Gearboxes Clean and Ready for New Oil.

When added to the old oil 220 emulsifies all moisture and residues holding them in suspension. Running the gear box or idling the engine for 15 to 30 minutes at zero load and

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full operating temperature, activates 220's high temperature metal deactivators and detergents cleaning by softening and dissolving deposits, suspending them ready for draining with the used oil.

APPLICATION:

1. Turn machine off after attaining normal operating temperature.
2. Add Liquid Intelligents 220 @ 10 to 100 % per volume of oil capacity, ratio to depend on the severity of the sludging and gumming.
3. Operate the machine for 10 to 15 minutes at full operating temperature, stop, then drain old lubricant and 220 while hot.
4. Replace oil plug, change filters and add fresh new oil.
5. Dispose of old oil by returning to local re-cycling depot for re-cycling.
6. Repeat application every oil change to ensure maximum engine protection.

Note:

When using Liquid Intelligents 220 do not operate the machine under load.
Only operate to circulate Liquid Intelligents 220 for cleaning purposes.

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SYDNEY AUSTRALIA
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